ASME Y14.100-2013
[Revision of ASME Y14.100-2004 (R2009)
and Consolidation of ASME Y14.42-2002 (R2008)]

Engineering Drawing Practices

Engineering Drawing and Related Documentation Practices

AN AMERICAN NATIONAL STANDARD

The American Society of Mechanical Engineers

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ASME Y14.100, Engineering Drawing and Related Documentation Practices, was adopted on 30 January 1998 for use by the Department of Defense, DoD. Proposed changes by DoD activities must be submitted to the DoD Adopting Activity: Commander, U.S. Army ARDEC, ATTN: AMSRD-AAR-AIS-SS, Picatinny Arsenal, NJ 07806-5000 or e-mailed to usarmy.picatinny.ardec.list.ardec-stdzn-branch@mail.mil. Copies of this document may be purchased from The American Society of Mechanical Engineers (ASME), 22 Law Drive, P.O. Box 2900, Fairfield, NJ 07007-2900; http://www.asme.org.

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The American Society of Mechanical Engineers
Two Park Avenue • New York, NY • 10016 USA

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This Standard will be revised when the Society approves the issuance of a new edition. There will be no written interpretations of the requirements of this Standard issued to this edition.

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Errata to codes and standards may be posted on the ASME Web site under the Committee Pages to provide corrections to incorrectly published items, or to correct typographical or grammatical errors in codes and standards. Such errata shall be used on the date posted.

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The American Society of Mechanical Engineers
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FOREWORD

This Standard addresses engineering drawing practices and ties together the engineering drawing and related documentation practices in the ASME Y14 series of standards. It is not the intent of this Standard to be a standalone document for the purpose of addressing basic practices. An accurate perception of engineering drawing practices is derived by treating ASME Y14.100, ASME Y14.24, ASME Y14.34, ASME Y14.35, and ASME Y14.41 as a composite set.

This Standard is a revision of ASME Y14.100-2004, Engineering Drawing Practices. The revision of this Standard was initiated after the official release of ASME Y14.100M-2000. The initial attempt to convert the DoD drawing practices standard, MIL-STD-100, to a nongovernment standard resulted in two drawing practices standards: ASME Y14.100M-1998, which consisted of basic practices common to DoD and industry, and MIL-STD-100G, which consisted of those practices and requirements unique to DoD. The impact on the community was that judgments on when to use which Standard as a standalone or in combination was causing a good deal of confusion. Accordingly, the realization of the problems presented by the existence of two basic drawing practices standards is the basis for the issue of this revision. The consensus was that one standard was needed. To accomplish this, this Standard contains appendices that may be invoked and tailored by DoD, thereby making possible the cancellation of MIL-STD-100.

It is not the intent of this Standard to prevent individual organizations from designing specific drawing practices that meet their individual needs but rather to provide common engineering delineation standards to aid the increasing interchange of drawings between industry, government, and other users. It is well recognized that individual companies have many detailed requirements for their specific method of operation. Consequently, the minimum requirements set forth in this Standard will provide them flexibility in implementation. The appendices are intended for use by other than strictly commercial applications, such as DoD. However, nothing prevents commercial organizations from using the appendices and tailoring them as necessary to meet their own needs.

The successful revision of this Standard is attributed to the subcommittee members and their respective companies and the Departments and Agencies of the U.S. government.

Suggestions for improvement of this Standard are welcome. They should be sent to The American Society of Mechanical Engineers; Attention: Secretary, Y14 Main Committee, Two Park Avenue, New York, NY 10016-5990.

This revision was approved as an American National Standard on June 7, 2013.

ASME Y14 STANDARDS COMMITTEE
Engineering Drawing and Related Documentation Practices

(The following is the roster of the Committee at the time of approval of this Standard.)

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CORRESPONDENCE WITH THE Y14 COMMITTEE

General. ASME Standards are developed and maintained with the intent to represent the consensus of concerned interests. As such, users of this Standard may interact with the Committee by requesting interpretations, proposing revisions, and attending Committee meetings. Correspondence should be addressed to:

Secretary, Y14 Standards Committee
The American Society of Mechanical Engineers
Two Park Avenue
New York, NY 10016-5990
http://go.asme.org/Inquiry

Proposing Revisions. Revisions are made periodically to the Standard to incorporate changes that appear necessary or desirable, as demonstrated by the experience gained from the application of the Standard. Approved revisions will be published periodically.

The Committee welcomes proposals for revisions to this Standard. Such proposals should be as specific as possible, citing the paragraph number(s), the proposed wording, and a detailed description of the reasons for the proposal, including any pertinent documentation.

Proposing a Case. Cases may be issued for the purpose of providing alternative rules when justified, to permit early implementation of an approved revision when the need is urgent, or to provide rules not covered by existing provisions. Cases are effective immediately upon ASME approval and shall be posted on the ASME Committee Web page.

Requests for Cases shall provide a Statement of Need and Background Information. The request should identify the Standard, the paragraph, figure or table number(s), and be written as a Question and Reply in the same format as existing Cases. Requests for Cases should also indicate the applicable edition(s) of the Standard to which the proposed Case applies.

Attending Committee Meetings. The Y14 Standards Committee regularly holds meetings or telephone conferences, which are open to the public. Persons wishing to attend any meeting or telephone conference should contact the Secretary of the Y14 Standards Committee or check our Web site at http://cstools.asme.org/csconnect/CommitteePages.cfm?Committee=C64000000.

ASME Y14.100-2013
SUMMARY OF CHANGES

Following approval by the Y14 Committee and ASME, and after public review, ASME Y14.100-2013 was approved by the American National Standards Institute on June 7, 2013.

ASME Y14.100-2013 includes editorial changes, revisions, and corrections introduced in ASME Y14.100-2004, as well as the following changes identified by a margin note, **(13)**.

Page	*Location*	*Change*
1	1.3	Added
2	2	Updated
4–11	3	(1) Definitions numbered and bolded (2) Definitions of *drawing* and *original* revised (3) Definitions of *alternate part*; *approval indicator*; *associated documents*; *authentication*; *biometrics*; *controlled media*; *Critical Safety Process (CSP)*; *cryptographic key*; *data elements*; *descriptive identifier*; *digital signature*; *Electrostatic Sensitive Device (ESD)*; *Environmental Impact (ENI)*; *Environmental Stress Screening (ESS)*; *field of drawing*; *Hazardous Conditions, Processes, or Materials (HAZ)*; *interchangeability*; *ozone-depleting chemicals*; *ozone-depleting processes*; *product definition elements*; *replaceability*; *signature*; *significant drawing numbering system*; *special characters*; *substitute part*; and *unsafe condition* added.
10	Table 3-1	Added
11	3.78	Added
12	3.79	Added
14	4.19	Added
16	4.27.4	Revised
17	4.30	Revised
51, 52	Nonmandatory Appendix F	Added
53, 54	Index	Updated

ENGINEERING DRAWING PRACTICES

1 GENERAL

1.1 Scope

This Standard establishes the essential requirements and reference documents applicable to the preparation and revision of manual or computer-generated engineering drawings and associated lists, unless tailored by a specialty standard. It is essential that this Standard be used in close conjunction with ASME Y14.24, ASME Y14.34, ASME Y14.35M, and ASME Y14.41.

1.2 Application

Application of this Standard may necessitate tailoring to exclude unnecessary requirements (see para 3.75). A tailoring guide, Nonmandatory Appendix A, has been included for that purpose.

1.3 ASME Y14 Series Conventions (13)

The following conventions are guidance used in this and other ASME Y14 series of standards.

1.3.1 Mandatory, Nonmandatory, Guidance, and Optional Words

(a) The words "shall" and "will" establish a mandatory requirement.

(b) The words "should" and "may" establish a recommended practice.

(c) The words "typical," "example," "for reference," or the Latin abbreviation "e.g." indicate suggestions given for guidance only.

(d) The word "or" used in conjunction with a mandatory requirement or a recommended practice indicates that there are two or more options on how to comply with the stated requirement.

1.3.2 Cross-Reference of Standards. Cross-reference of Standards in text with or without a date following the standard identity is interpreted as follows:

(a) Reference to other ASME Y14 series standards in the text without a date following the standard identity indicates the issue of the standard as identified in the Reference section (section 2) shall be used to meet the requirement.

(b) Reference to other ASME Y14 series standards in the text with a date following the standard identity indicates that only that issue of the standard shall be used to meet the requirement.

1.3.3 Invocation of Referenced Standards. The following examples define the invocation of a standard when specified in the Reference section (section 2) and referenced in the text of this Standard:

(a) When a reference standard is cited in the text with no limitations to a specific subject or paragraph(s) of the standard, the entire standard is invoked, e.g., "dimensioning and tolerancing shall be in accordance with ASME Y14.5" is invoking the complete standard because the subject of the standard is dimensioning and tolerancing, and no specific subject or paragraph(s) within the standard are invoked.

(b) When a referenced standard is cited in the text with limitations to a specific subject or paragraph(s) of the standard, only the paragraph(s) on that subject is invoked, e.g., "assign part or identifying numbers in accordance with ASME Y14.100" is only invoking the paragraph(s) on part or identifying numbers because the subject of the standard is engineering drawing practices, and part or identifying numbers is a specific subject within the standard.

(c) When a reference standard is cited in the text without an invoking statement, such as "in accordance with," the standard is for guidance only, e.g., "for gaging principles, see ASME Y14.43" is only for guidance, and no portion of the standard is invoked.

1.3.4 Parentheses Following a Definition. When a definition is followed by a standard referenced in parentheses, the standard referenced in parentheses is the source for the definition.

1.3.5 Notes. Notes depicted in this Standard in ALL UPPERCASE letters are intended to reflect actual drawing entries. Notes depicted in Initial Uppercase or lowercase letters are to be considered supporting data to the contents of this Standard and are not intended for literal entry on drawings.